

Appl. No. : 09/847,208
Filed : May 1, 2001

under the guidelines discussed in M.P.E.P. § 806.05(h). In addition applicants were requested to elect a single disclosed species of the allergens identified by SEQ ID NOS: 8-173. The Examiner noted that "[u]pon the allowance of a generic claim, applicant will be entitled to consideration of additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim."

The invention of Group V (claims 42-54) is elected, with traverse. It is submitted that claim 1, and dependent claims 2-6, 22-27, 29-30, and 40-41 are drawn to the same invention as claims 42-54, and therefore should be examined along those claims. As explained throughout the specification, and specifically at pages 21-28, a specific embodiment of the invention concerns fusion molecules in which the first polypeptide sequence is capable of specific binding to a native IgG inhibitory receptor comprising an ITIM motif, and the second polypeptide sequence is capable of specific binding directly to a native IgE receptor. Since the binding to the IgG and IgE receptor, respectively, is direct (i.e. without any intermittent sequence, such as an antibody), this embodiment of the invention does not involve the presence of an antigen sequence. Claims 42-54 listed as Group V in the restriction requirement, represent a subgenus of the more generic embodiment represented by claim 1, and are, therefore, believed to be drawn to the same invention.

Accordingly, the Examiner is respectfully requested to reconsider the present restriction/election requirement, and examine all claims retained in the present application.

Since the fusion proteins covered by the present claims do not bind to the IgE receptor via an allergen sequence (in that case binding would be "indirect"), the election of species requirement does not apply.

Attached herewith is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show the changes made.**"

Applicant respectfully request that a timely Notice of Allowance be issued in this case.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: Ginger R. Dreger
Ginger R. Dreger
Registration No. 33,055
Attorney of Record
620 Newport Center Drive
Sixteenth Floor
Newport Beach, CA 92660
(415) 954-4114

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Version with markings to show the changes made

Claims 7-21, 28, 31-39, and 54-72 have been canceled, claims 1, 22, and 42 have been amended, and claims 73-76 have been added. In the following section the unamended claims are shown in italics for the Examiner's convenience.

1. (Amended) An isolated fusion molecule comprising a first polypeptide sequence, other than an antibody variable region, capable of specific binding to a native IgG inhibitory receptor comprising an immune receptor tyrosine-based inhibitory motif (ITIM), expressed on mast cells, basophils or B cells, functionally connected to a second polypeptide sequence, other than an antibody variable region, capable of specific binding[,] directly [or indirectly,] to a native IgE receptor (FcεR).

2. *The fusion molecule of claim 1 wherein said inhibitory receptor is a low-affinity IgG receptor FcγRIIb.*

3. *The fusion molecule of claim 2 wherein said IgE receptor is a high-affinity FcεRI receptor.*

4. *The fusion molecule of claim 2 wherein said IgE receptor is a low-affinity IgE receptor FcεRII (CD23).*

5. *The fusion molecule of claim 3 wherein said FcγRIIb and FcεRI receptors are of human origin.*

6. *The fusion molecule of claim 4 wherein said FcγRIIb and FcεRII receptors are of human origin.*

22. (Amended) The fusion molecule of claim 1 [or claim 10] wherein said first and second polypeptide sequences are connected through a linker.

23. *The fusion molecule of claim 22 wherein said linker is a polypeptide sequence.*

24. *The fusion molecule of claim 23 wherein said polypeptide sequence consists of 5 to 25 amino acid residues.*

25. *The fusion molecule of claim 23 wherein said polypeptide sequence consists of 10 to 25 amino acid residues.*

26. *The fusion molecule of claim 23 wherein said polypeptide sequence consists of 15 to 25 amino acid residues.*

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27. *The fusion molecule of claim 1 wherein said first and second polypeptide sequences are directly fused to each other.*

29. *The fusion molecule of claim 3 wherein said first polypeptide comprises an amino acid sequence having at least 90% sequence identity with the hinge-CH2-CH3 portion of an IgG immunoglobulin heavy chain constant region*

30. *The fusion molecule of claim 29 wherein said immunoglobulin is selected from the group consisting of IgG₁, IgG₂, IgG₃ and IgG₄.*

40. *The fusion molecule of claim 3 wherein said first polypeptide sequence comprises a sequence encoded by nucleic acid hybridizing under stringent conditions to the complement of the hinge-CH2-CH3 coding sequence of SEQ ID NO: 1, wherein said first polypeptide sequence is capable of specific binding to a native human FcγRIIb receptor.*

41. *The fusion molecule of claim 3 wherein said second polypeptide sequence comprises a sequence encoded by nucleic acid hybridizing under stringent conditions to the complement of the CH2-CH3-CH4 coding sequence of SEQ ID NO: 4, wherein said second polypeptide sequence is capable of specific binding to a native human FcεRI receptor.*

42. (Amended) [A single-chain] The fusion molecule of claim 1 comprising a first polypeptide sequence having at least 90% sequence identity with the amino acid sequence of SEQ ID NO: 3 and capable of specific binding to a native human FcγRIIb receptor, functionally connected to a second polypeptide sequence having at least 90% sequence identity with the amino acid sequence of SEQ ID NO: 6 and capable of specific binding directly to a native human FcεRI receptor.

43. *The fusion molecule of claim 42 wherein said first polypeptide sequence comprises at least part of the CH2 and CH3 domains of a native human IgG₁ constant region.*

44. *The fusion molecule of claim 43 wherein said first polypeptide sequence additionally comprises at least part of the hinge of a native human IgG₁ constant region.*

45. *The fusion molecule of claim 44 wherein said first polypeptide sequence comprises at least part of the hinge, CH2 and CH3 domains of a native human IgG₁ heavy chain constant region, in the absence of a functional CH1 region.*

46. *The fusion molecule of claim 45 wherein said first polypeptide sequence consists of the hinge, CH2 and CH3 domains of a native human IgG₁ heavy chain constant region.*

47. *The fusion molecule of claim 42 wherein said second polypeptide sequence comprises at least part of the CH2, CH3, and CH4 domains of a native human IgE heavy chain constant region.*

48. *The fusion molecule of claim 47 wherein said second polypeptide sequence consists of the CH2, CH3 and CH4 domains of a native human IgE heavy chain constant region.*

49. *The fusion molecule of claim 48 wherein said second polypeptide sequence is functionally connected to a first polypeptide sequence consisting of the hinge, CH2 and CH3 domains of a native human IgG1 heavy chain constant region sequence through a polypeptide linker.*

50. *The fusion molecule of claim 49 wherein said polypeptide linker consists of 5 to 25 amino acid residues.*

51. *The fusion molecule of claim 50 wherein said polypeptide linker consists of 10 to 25 amino acid residues.*

52. *The fusion molecule of claim 51 wherein said polypeptide linker consists of 15 to 25 amino acid residues.*

53. *The fusion molecule of SEQ ID NO: 7.*

The following claims have been added:

--73. The fusion molecule of claim 1 covalently linked to a second identical fusion molecule to form a homodimer.

74. The fusion molecule of claim 73 wherein said linkage is through one or more disulfide bonds.

75. The fusion molecule of claim 42 covalently linked to a second identical fusion molecule to form a homodimer.

76. The fusion molecule of claim 75 wherein said linkage is through one or more disulfide bonds.--